



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/052,491

01/23/2002

Richard W. Campbell

P 290625 4069US/CNT/1

7311

909

7590

06/07/2004

PILLSBURY WINTHROP, LLP  
P.O. BOX 10500  
MCLEAN, VA 22102

EXAMINER

VO, HAI

ART UNIT

PAPER NUMBER

1771

DATE MAILED: 06/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/052,491

Applicant(s)

CAMPBELL ET AL.

Examiner

Hai Vo

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 14-34 is/are pending in the application.
- 4a) Of the above claim(s) 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 14-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 0123
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***Election/Restrictions***

1. Applicant's election of Group I, claims 1-8 and 14 in the Response to Election/Restriction filed on 03/23/04 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 24 and 33 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Support for the coating-free plug is not found in Applicant's specification. The mere absence of such a recitation in the specification is not basis for an exclusion.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-3, 8, 14-17, 22 and 34 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Matthews (US 5,356,958). Matthews discloses a syntactic foam panel comprising at least one face sheet of thermoplastic resin reinforced with microspheres a foam core prepared from a mixture of hollow glass microspheres and thermoplastic resin (abstract). The thermoplastic resin includes polyaryletherketones, i.e., PEEK (column 3, lines 12-13). The syntactic foam is prepared by thermoforming (column 3, lines 62-63). Matthews does not specifically disclose the plug, however, it has been held that a recitation with respect to the manner in which a claimed syntactic foam is intended to be employed does not differentiate the claimed syntactic foam from a prior art panel satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Matthews does not specifically disclose the melting point of the thermoplastic resin and the hollow filler having a lower density than the thermoplastic resin. It appears that Matthews is using the same thermoplastic resin and the same hollow microsphere as Applicant. Therefore, it is not seen that the melting point of the PEEK and the density of the hollow glass microsphere would have been outside the

claimed ranges. Like material has like property. This is in line with *In re Spada*, 15 USPQ 2d 1655 (1990) which holds that products of identical chemical composition can not have mutually exclusive properties. Note *In re Best* 195 USPQ at 433, footnote 4 (CCPA 1977) as to the providing of this rejection under 35 USC 103 in addition to the rejection made under 35 USC 102. It is the examiner's position that Matthews anticipates or strongly suggests the claimed subject matter.

7. Claims 1-8, and 14-34 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over GB 1,054,171 (GB'171). GB'171 discloses an article made of polylactam and hollow glass microspheres (column 1, lines 20-43). The lactams contain at least 6 carbon atoms (column 2, lines 80-85). The article has a reduced density while still maintaining high strength and durability. The syntactic foam comprises 50 % by volume microspheres (example 1) within the claimed range. There is no disclosure of coating on the polylactam article, therefore the article is substantially coating free. GB'171 does not specifically disclose the plug made up of a polylactam foam, however, it has been held that a recitation with respect to the manner in which a claimed syntactic foam is intended to be employed does not differentiate the claimed syntactic foam from a prior art polylactam foam satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

GB'171 does not specifically disclose the melting point of the thermoplastic resin and the hollow filler having a lower density than the thermoplastic resin. It appears that GB'171 is using the same thermoplastic resin and the same hollow

microsphere as Applicant. Therefore, it is not seen that the melting point of the polylactam and the density of the hollow glass microsphere would have been outside the claimed ranges. Like material has like property. This is in line with In re Spada, 15 USPQ 2d 1655 (1990) which holds that products of identical chemical composition can not have mutually exclusive properties. Note In re Best 195 USPQ at 433, footnote 4 (CCPA 1977) as to the providing of this rejection under 35 USC 103 in addition to the rejection made under 35 USC 102. It is the examiner's position that GB'171 anticipates or strongly suggests the claimed subject matter.

8. Claims 1-4, 7, 8, 14-18; 21-28, and 31-34 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Curzon et al (US 5,597,522). Curzon discloses a tape of composite syntactic foam made up of a polyolefin blend and hollow glass microspheres (abstract). The polyolefin blend comprises a polyamide (column 3, line 49). The syntactic foam is prepared by thermoforming (column 3, lines 65-67). The syntactic foam comprises 30 to 60 % by volume microspheres (column 3, lines 26-29) within the claimed range. The smooth-surface tape is produced from a composite material of polyolefin blend and hollow microsphere filler (column 2, lines 45-47). Likewise, the tape is apparently coating free. Curzon does not specifically disclose the plug made up of a syntactic foam, however, it has been held that a recitation with respect to the manner in which a claimed syntactic foam is intended to be employed does not differentiate the claimed syntactic foam from a prior art insulating tape satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987).

Curzon does not specifically disclose the melting point of the thermoplastic resin and the hollow filler having a lower density than the thermoplastic resin. It appears that Curzon is using the same thermoplastic resin and the same hollow microsphere as Applicant. Therefore, it is not seen that the melting point of the polyamide and the density of the hollow glass microsphere would have been outside the claimed ranges. Like material has like property. This is in line with In re Spada, 15 USPQ 2d 1655 (1990) which holds that products of identical chemical composition can not have mutually exclusive properties. Note In re Best 195 USPQ at 433, footnote 4 (CCPA 1977) as to the providing of this rejection under 35 USC 103 in addition to the rejection made under 35 USC 102. It is the examiner's position that Curzon anticipates or strongly suggests the claimed subject matter.

9. Claims 5, 6, 19, 20, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Curzon et al (US 5,597,522) as applied to claims 1, 15, and 25 above, further in view of Ren (US 6,022,613). Curzon does not specifically disclose the polyamide formed from a lactam monomer having at least 6 carbon atoms. Ren, however, teaches a film made from a polyamide such as nylon-6 or nylon 6,6 prepared from a lactam monomer having at least 6 carbon atoms (column 2, lines 40-50, column 4, lines 15-35). Ren also teaches the resulting film having high transparency, high heat distortion temperature, high flexibility and good mechanical strength. This is important to the expectation of successfully practicing the invention of Curzon and thus suggesting the modification. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to

prepare the polyamide from a lactam monomer having at least 6 carbon atoms motivated to provide the film having high transparency, high heat distortion temperature, high flexibility and good mechanical strength.

10. Support for "non-thermosetting resin material" is found at page 5, lines 29-32 of Applicant's specification. Since it is not a new matter, the examiner suggests that Applicant incorporate such a limitation in the specification to provide sufficient antecedent basis for the limitation in the claim.

### ***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (571) 272-1485. The examiner can normally be reached on M,T,Th, F, 7:00-4:30 and on alternating Wednesdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

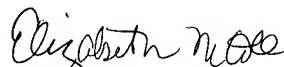
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.



Art Unit: 1771

Should you have questions on access to the Private PAIR system, contact the  
Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HV

  
ELIZABETH M. COLE  
PRIMARY EXAMINER